MONTHLY REPORT

[redacted] 25X1

PAR 212

2 Oct 64

SUBJECT: Color Acquisition System Review Study

TASK/PROBLEM

1. Investigate color photography as a possible anticipated intelligence medium. Investigation should cover the capability of present and possible future acquisition systems in an attempt to predict future requirements to support exploitation and data reduction of the collected color photographic intelligence material.

DISCUSSION

2. Evaluation of two high altitude acquisitions continues. These two acquisitions were over the southwestern and west coast regions (selected target areas) which included all types of typical terrain and man-made features. The material used was Kodak Special Color Film (Estar Thin Base) Type SO-121.

3. The first acquisition was on 70mm material with Type SO-121 film in the forward camera and Kodak High Definition Aerial Film (Estar Thin Base) Type 4404 in the aft camera. Altitude was 68,000 feet.

4. Preliminary evaluation indicated that the SO-121 material was highly satisfactory. Ground resolution was estimated to be about [redacted] 25X1 level. In some high mountainous regions resolution was as low as [redacted] 25X1 because of targets being much closer to camera and reduced haze caused by high altitude of ground targets. High contrast targets (e.g. white painted lane dividers on black top roads and parking areas) were easily seen.

Declass Review by NGA.

5. As expected, scene contrasts were medium to low regardless of terrain and man-made features.

6. The second acquisition flight plan covered the same target areas. The system was a "B" configuration. Type SO-121 was in the left camera and Kodak Panatomic-X Aerial Film (Estar Thin Base) Type 4400 in the right camera.

7. Results were similiar to the first flight except ground resolution was three to four feet over-all. High contrast targets (e.g., roadway dividers and parking lot spacers) were clearly discernible but were not as sharp. Also, there appeared to be slightly less haze than that encountered on the first flight. The two flights were flown 24 hours apart.

8. Detailed analysis of scene luminance and luminance ranges is being developed.

PLANNED ACTIVITIES

9. Efforts to maintain the "Usability Data for Acquisition Materials" chart will continue.

10. Briefing aids for PAR 212 will be developed in light of the two successful color acquisitions.

11. Refinement of techniques for acquisition materials handling and equipment required will continue.